



(11)

EP 2 020 729 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
29.04.2009 Bulletin 2009/18

(51) Int Cl.: *H02J 15/00* (2006.01) *B60H 1/00* (2006.01)
F24H 7/04 (2006.01) *F28D 20/02* (2006.01)

(43) Date of publication A2:
04.02.2009 Bulletin 2009/06

(21) Application number: **08161535.3**

(22) Date of filing: 31.07.2008

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR
 Designated Extension States:
AL BA MK RS

(30) Priority: **03.08.2007 EP 07113790**

(71) Applicant: **Iveco Motorenforschung AG**
CH-9320 Arbon (CH)

(72) Inventor: **Gstrein, Wolfgang**
9320 Arbon (CH)

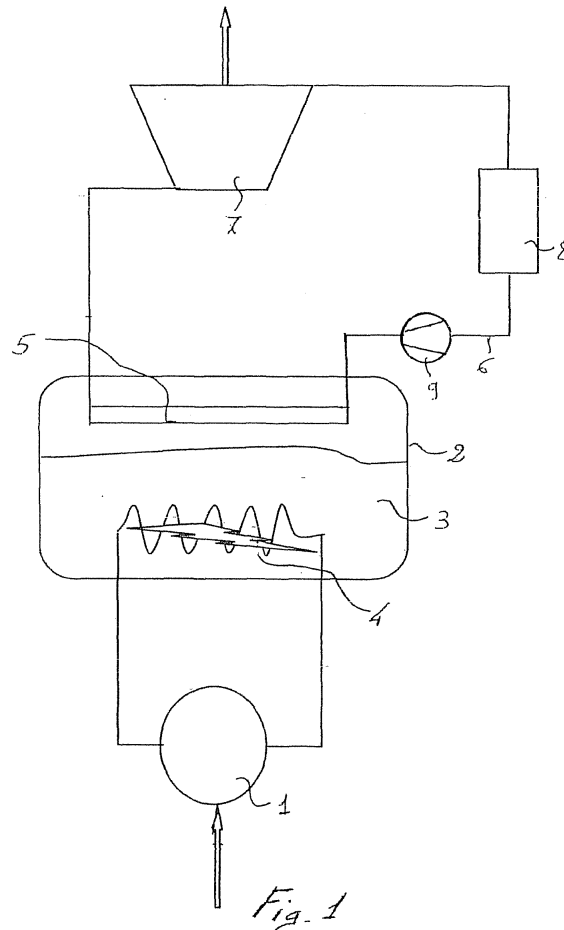
(74) Representative: **Borsano, Corrado et al**
Notarbartolo & Gervasi S.p.A.
Corso di Porta Vittoria, 9
20122 Milano (IT)

(54) **An energy storage process and system**

(57) An energy storage process comprising:
electric energy generation;
evaporation of a metal by means of said electric energy.

The process comprises the subsequent transfer of heat from said metal to an appropriate means, for re-use as heat or to generate mechanical or electric energy.

An energy storage system suitable to implement said process.





EUROPEAN SEARCH REPORT

Application Number
EP 08 16 1535

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 3 817 322 A (ASSELMAN G ET AL) 18 June 1974 (1974-06-18) * figure 1a * * column 1, line 5 - line 7 * * column 1, line 58 - line 65 * * column 2, line 32 - line 51 * * column 5, line 39 - line 61 *	1-12	INV. H02J15/00 B60H1/00 F24H7/04 F28D20/02
A	EP 0 640 503 A (SEIKO EPSON CORP [JP]) 1 March 1995 (1995-03-01) * abstract * * column 4, line 3 - line 37 * * column 22, line 8 - column 26, line 47 *	1-4, 10-12	
A	US 4 753 072 A (JOHANSSON LENNART N [US] ET AL) 28 June 1988 (1988-06-28) * abstract *	1-9	
A	WO 00/79202 A (YEDA RES & DEV [IL]; YOGEV AMNON [IL]; EPSTEIN MICHAEL [IL]; ADINBERG) 28 December 2000 (2000-12-28) * abstract * * page 2, line 17 - page 5, line 13 * * figures 2-5,7 *	1,6-9	TECHNICAL FIELDS SEARCHED (IPC) H02J B60H F24H F28D
A	EP 1 426 720 A (HONDA MOTOR CO LTD [JP]) 9 June 2004 (2004-06-09) * abstract *	1-3,11, 12	
A	EP 0 827 853 A (ISAD ELECTRONIC SYS GMBH & CO [DE]) 11 March 1998 (1998-03-11) * abstract *	1-3, 10-12	
A	WO 96/05476 A (STORE HEAT AND PRODUCE ENERGY [US]) 22 February 1996 (1996-02-22) * abstract * * page 13, line 24 - line 30 *	10	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 March 2009	Examiner Hurtado-Albir, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)



EUROPEAN SEARCH REPORT

Application Number
EP 08 16 1535

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	BERKAN R C ET AL: "Modern control theory applications to liquid metal reactors" 19890409; 19890409 - 19890412, 9 April 1989 (1989-04-09), pages 1245-1249, XP010082226 * abstract * * page 1245, right-hand column, paragraphs 1,2 * -----	11,12	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 March 2009	Examiner Hurtado-Albir, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

7

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 16 1535

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-03-2009

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3817322	A	18-06-1974	NONE	
EP 0640503	A	01-03-1995	DE 69413481 D1	29-10-1998
			DE 69413481 T2	11-03-1999
			WO 9421481 A1	29-09-1994
			JP 3353299 B2	03-12-2002
			US 5507153 A	16-04-1996
US 4753072	A	28-06-1988	DE 3804046 A1	25-08-1988
			FR 2610671 A1	12-08-1988
			GB 2201468 A	01-09-1988
			IT 1219435 B	18-05-1990
			JP 1200049 A	11-08-1989
			SE 8800382 A	12-08-1988
WO 0079202	A	28-12-2000	AU 4946800 A	09-01-2001
			JP 2003502614 T	21-01-2003
			ZA 200110020 A	05-03-2003
EP 1426720	A	09-06-2004	CA 2449838 A1	22-05-2004
			JP 3889698 B2	07-03-2007
			JP 2004176932 A	24-06-2004
			US 2004197090 A1	07-10-2004
EP 0827853	A	11-03-1998	AT 228946 T	15-12-2002
			DE 19636523 A1	12-03-1998
			JP 10147136 A	02-06-1998
			US 5938114 A	17-08-1999
WO 9605476	A	22-02-1996	AU 686445 B2	05-02-1998
			AU 3322995 A	07-03-1996
			BR 9508549 A	25-11-1997
			CA 2197223 A1	22-02-1996
			EP 0775285 A1	28-05-1997
			JP 10504257 T	28-04-1998
			PL 318528 A1	23-06-1997
			RU 2146034 C1	27-02-2000
			US 6059016 A	09-05-2000

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82